

## **ABOVE-GROUND SWIMMING POOL WITH DECORATIVE WALL PANELS**

### **CROSS REFERENCE TO RELATED APPLICATION**

This application claims the benefit of U.S. Provisional Application No. 60/539,100 filed on January 27, 2004, the contents of which are incorporated herein by reference.

### **BACKGROUND OF THE INVENTION**

#### **Field of the Invention**

The present invention relates to water pools, more specifically to above-ground swimming pools.

#### **Background Art**

Above-ground swimming pools are usually composed of a flexible wall of sheet metal supported by upright posts. A desired pool shape is commonly maintained by a rail member or ledge supporting the top of the wall and by a base member supporting the bottom of the wall. Above-ground swimming pools are commonly manufactured in a variety of shapes such as circular, oval, octagonal, etc.

One of the main reasons why people choose to buy an above-ground swimming pool rather than an in-ground swimming pool is cost. It is well known that above-ground is the cheapest pool construction option. However, a typical above-ground swimming pool, with its metallic posts, ledge and base member supporting a sheet metal wall, is often difficult to esthetically integrate in a backyard.

A number of above-ground pool manufacturers have chosen to provide more esthetically pleasing above-ground swimming pools with a structure entirely made of wood. This design is often qualified as being elegant, adding a decorative touch to a backyard. However, these wood pools are less durable than standard above-ground swimming pools, since the wood has a tendency to warp and degrade over time. In addition, wood pools generally require appreciably more maintenance than standard swimming pools. Moreover, the assembly of a wood structure is generally a lot more complex than that of a standard above-ground swimming pool structure.

Accordingly, there is a need for an esthetically pleasing above-ground swimming pool that is durable, requires minimal maintenance and is relatively easy to assemble.

## SUMMARY OF INVENTION

It is therefore an aim of the present invention to provide an improved above-ground swimming pool.

Therefore, in accordance with the present invention, there is provided an above-ground swimming pool comprising structural paneling defining a pool perimeter, a plurality of structural vertical posts regularly spaced apart along the pool perimeter and retaining the structural paneling, a structural ledge supported by the structural vertical posts and retaining the structural paneling at a top end thereof along the pool perimeter, and a plurality of decorative panels installed so as to substantially hide the structural paneling from view.

Also in accordance with the present invention, there is provided a decorating kit for an existing above-ground swimming pool, the swimming pool including structural paneling, a plurality of structural vertical posts and a top structural ledge, the kit comprising a plurality of decorative vertical posts designed to be attached over the structural vertical posts so as to substantially hide the structural vertical posts from view, a plurality of decorative panels designed to be retained by adjacent decorative vertical posts so as to substantially hide the structural paneling from view, and a decorative ledge designed to be attached to the decorative vertical posts so as to substantially hide the top structural ledge from view.

Further in accordance with the present invention, there is provided a method for assembling an above-ground swimming pool comprising the steps of installing a plurality of structural vertical posts in a regularly spaced-apart manner along a desired pool perimeter, installing structural paneling along the desired pool perimeter so that the structural paneling is retained by the vertical posts, installing a structural ledge defining the desired pool perimeter on top of the vertical posts, the structural ledge retaining the structural paneling along a top end thereof, and installing a plurality of decorative panels over the structural paneling so that the structural paneling is substantially hidden from view.

Further yet in accordance with the present invention, there is provided an above-ground swimming pool comprising a skeleton structure adapted to hold a body of water, and a decorative panel assembly applied to the pool outwardly of the skeleton structure.

## BRIEF DESCRIPTION OF THE DRAWINGS

Having thus generally described the nature of the invention, reference will now be made to the accompanying drawings, showing by way of illustration a preferred embodiment thereof and in which:

Fig. 1 is a perspective view of a round above-ground swimming pool according to one embodiment of the present invention;

Fig. 2 is a top view of a decorative panel for the swimming pool of Fig. 1;

Fig. 3 is a top view of a decorative post for the swimming pool of Fig. 1;

Fig. 4 is a broken perspective view showing the assembly of various elements of the swimming pool of Fig. 1;

Fig. 5 is a perspective view of the assembly of a decorative panel and post which are an alternative to the decorative panel and decorative post presented in Figs. 2-3;

Fig. 6 is a perspective view of an apparently polygonal above-ground swimming pool according to another embodiment of the present invention;

Fig. 7 is a top view of the swimming pool of Fig. 6

Fig. 8 is a top view of decorative panels and a decorative post for the swimming pool of Fig. 6;

Fig. 9 is a broken perspective view showing the assembly of a structural panel and a decorative panel according to yet another embodiment of the present invention;

Fig. 10 is a side view of the assembled structural and decorative panels of Fig. 9; and

Figs. 11A and 11B are perspective partial views of the assembly of two swimming pools having different diameters according to the embodiment of Fig. 6.

## DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to Figs. 1 and 4, a circular above-ground swimming pool generally indicated at 10 comprises a circular base member 12 generally shaped as a rail so as to retain structural wall paneling 14 which is usually made of sheet metal. The structural paneling 14 is also retained by a plurality of regularly spaced-apart structural posts 19 (see Fig. 5) and by a top rail or structural ledge 16 (see Fig. 4) connected to plates 18 attached on top and on the bottom of each structural post. This structural assembly is typical of the art of above-ground swimming pools and preferably made of metal such as steel.

However, the swimming pool 10 of the present invention is given a more esthetically pleasing appearance through a plurality of decorative wall panels 20, preferably mimicking vertical wood boards, hiding the structural paneling 14 from view. Similarly, decorative posts 22 hide the structural posts 19 and a decorative ledge 24 hides the structural ledge 16. Both the decorative posts and ledge 22, 24 also preferably mimic the appearance of wood.

Referring to Fig. 2, a decorative panel 20 is shown. The decorative panel comprises a panel body 26 which is substantially thin. A tenon 28 is formed along one lateral edge of the body 26 while a mortise 30 is formed along the opposite lateral edge. A plurality of supports 32 are integral with a back side of the panel body 26. When assembled, the supports 32 are in contact with the structural paneling 14 of the pool to ensure solidity of the assembly. The panels 20 are connected to one another by engaging the mortise 30 and tenon 28 of adjacent panels, as shown with the panel 20 and the additional panel 20' indicated in broken lines.

The decorative panel 20 is preferably designed so as to mimic the appearance of one or more adjacent vertical wood boards. While it is preferred that a plurality of adjacent engaged panels extend between adjacent decorative posts, it is also considered to have a single wide panel between adjacent decorative posts. The decorative panels 20 must be thin enough to allow sufficient bending, or otherwise narrow enough, so that the decorative panels 20 can closely follow the round perimeter of the pool 10. The decorative panels 20 can have a minimal thickness since their contact with the structural paneling 14 ensures the structural stability of the assembly.

Referring to Fig. 3, a decorative post 22 is shown. The decorative post 22 comprises two panels 34 integrally connected at an angle by a joint 36. The panels 34 can either be relatively thin, for example as thin as the decorative panels 20, if the decorative post 22 is attached to a structural post 19, or the panels 34 can be thicker if the decorative post 22 replaces the structural post 19. Similarly to the decorative panels 20, a tenon 38 is formed along one lateral edge of the decorative post 22 while a mortise 40 is formed along the opposite lateral edge. A support 42 is provided in proximity to the tenon 38 for contact with the structural paneling 14. Projections 44 with threaded holes 46 are included on a rear wall of the panels 34 for attaching the plate 18 on the decorative post 22 through screws or equivalent fastening means. As shown in Fig. 4, the decorative panels 20 are joined to the decorative post 22 in the same manner as they are joined to one another, i.e. by mortise and tenon joints.

The decorative panels 20 are thus supported by the decorative posts 22 as described above so as to be in contact with the structural paneling 14 through the supports 32. The decorative panels 20 may also be supported along a top end thereof by the decorative ledge 24. It is also considered to have the decorative panels 20 supported by the structural ledge 16 or by the base member 12, or both, in a rail in a manner similar to a standard structural paneling support (see Fig. 4).

While this embodiment has been described with respect to a circular pool, a similar construction could be used with a polygonal pool as well as with a pool of a different shape. With a pool having a polygonal or another straight edge perimeter, the decorative panels 20 can be substantially thicker and wider since they are not required to bend in order to conform to the pool perimeter between adjacent decorative posts.

Referring to Fig. 5, an alternative to the decorative posts 22 is presented. A decorative panel 20a with a straight edge is engaged directly in the structural post 19 together with the structural paneling 14. The structural post 19 can be a standard structural post or be made from decorative material so as to mimic the appearance of wood.

Referring to Figs. 6, 7, 11A and 11B, another embodiment of the present invention, comprising a polygonal above-ground swimming pool 110, is shown. The structural part of the swimming pool 110 is similar to that of the swimming pool 10, i.e. the swimming pool 110 comprises a circular base member 112a, b retaining structural wall paneling 114 which is usually made of sheet metal. The structural paneling 114 is also retained by structural posts 119a, b and by a structural ledge (not shown). As with the previous embodiment, the structural paneling 114 is hidden from view by decorative wall panels 120, the structural posts by decorative posts 122, and the structural ledge by a decorative ledge 124. However, the decorative panels 120 are designed so as to mimic a single or a plurality of horizontal wood boards, with superposed panels simply in contact with one another or engaged together through mortise and tenon joints similar to that described in the previous embodiment. The decorative panels 120 do not follow the structural paneling 114 but instead create a polygonal perimeter around the original circular pool perimeter. Since the decorative panels 120 are not supported along their entire width by the structural paneling 114, as was the case in the previous embodiment, they need to be thicker than the decorative panels 22 of the previous embodiment in order to have an adequate structural stability.

In order to have a stable structure and to minimize a necessary thickness of the decorative panels 120, it is preferred that the decorative panels 120 come in contact at their

center with the structural paneling 114. This signifies that ends of the decorative panels 120, i.e. where the decorative panels 120 will be retained by the decorative posts 122a, b, will be set at different distances from the structural paneling in pools having different diameters. To compensate, the structural post 119a, b are preferably radially adjustable, as shown in Figs. 11A-11B, where Fig. 11A represents a pool having a larger diameter than Fig. 11B. In Fig. 11A, the structural post 119a is attached on the plates 118a (only the bottom plate is shown but the structural post 119a is attached to a similar plate at a top end thereof) so as to be almost in contact with the base member 112a. In contrast, the structural post 119b in Fig. 11B is attached to the plates 118b with a larger radial space with respect to the base member 112b. This adjustment allows to use the same decorative posts 122a, b, attached to the structural posts 119a, b in the same manner, for pools of different diameters while always allowing the decorative panels 120 retained by the decorative posts 112a, b to come in contact with the structural paneling 114 along their center.

Referring to Fig. 8, the assembly of two decorative panels 120 with a decorative post 122 is shown. The decorative post 122 comprises two front panels 134 each integrally connected at an angle to a center panel 152, the two center panels 152 being spaced apart. A back panel 150 is integrally and perpendicularly connected to the center panels 152 so as to leave a free space between the back panel 150 and each front panels 134 in which a straight edge of a decorative panel 120 is pinched. The decorative post 122 is connected to a structural post (not shown) by at least one screw 154 going through the back panel 150 between the center panels 152. The front, back and center panels 134, 152, 150 are preferably made of metal. A cover 153 made of the same material as the decorative panels is frictionally engaged between the center panels 152 and extends such as to hide the front, back and center panels 134, 152, 150 and the screw 154 from view.

Each decorative panel 120 is thus supported along both ends by adjacent decorative posts 122, which are attached to the structural posts of the pool. The decorative and structural posts support the decorative ledge 124, which also retains the top decorative panel 120 along a top edge thereof.

While this embodiment has been described with respect to a round structural perimeter, a similar construction could be used with a polygonal structural perimeter or one with a different shape. With a pool having a polygonal or another straight edge structural perimeter, each horizontal decorative panels 120 extending between adjacent decorative posts 122 can be retained in close relationship with the structural paneling 114, as in the previous

embodiment. Thus, the decorative panels 120 in this case can be thinner since they are supported by the structural paneling 114.

Since the two above-described embodiments involve adding decorative coverings to standard structural elements of a swimming pool, it is also considered to provide some or all of the decorative elements together in a kit to be installed on an existing standard above-ground swimming pool.

In both embodiments described, the structural part of the swimming pool (base member, structural posts, structural paneling, plates, structural ledge) are installed in the manner known in the art of standard above-ground swimming pools. The decorative panels are then installed over the structural paneling in the following manner. If the decorative panels are retained directly on the structural posts, then each decorative panel is simply slid into place. In that case, it may be necessary to install the decorative panels before installing the structural ledge. If decorative posts are used, then a first decorative post is attached on a structural post. One end of a decorative panel is then preferably connected to the decorative post using the means described above. The other end of the decorative panel is preferably connected to an uninstalled decorative post, which is then attached on the next structural post. All decorative panels are preferably installed the same way, one end connected to an installed decorative post and the other end to a decorative post to be installed afterwards, in order to facilitate the installation process. The decorative ledge is then attached over the structural ledge.

Referring to Figs. 9-10, another embodiment of the present invention is shown. This structure is designed to be used for polygonal or other straight edges swimming pools. An improved structural panel 160 is composed of two smaller panels 166. Each smaller panel 166 includes a first small flange 168a, b along one of the top and bottom edges, a larger flange 169a, b along the other of the top and bottom edges, and a pair of side flanges along lateral edges. The two panels are joined together by the small flanges 168a, b. The top flange 169a of the assembly is connected to the decorative ledge 124 through screws 164. The bottom flange 169b of the assembly includes a small vertical retaining flange 170 set at a distance from the panel 166. A decorative panel 162, mimicking a plurality of wood boards through a series of grooves 172 and elevated flat surfaces 174, is inserted in the panel 160 and retained along a top edge thereof by the screws 164 and along a bottom end thereof by the retaining flange 170.

Adjacent structural panels 160 are connected by the side flanges 171. Thus, with this type of assembly, the need for posts, a base member and a structural ledge is eliminated. The structural panels 160 are self-standing and retain the decorative panels on their own.

In all the embodiments, the decorative panels, posts and ledges are preferably manufactured from any adequate plastic or composite material by extrusion or heat-forming. The decorative covering elements could also be manufactured from real wood and derivative products. The assembly complexity of this improved above-ground swimming pool is comparable to that of a standard above-ground swimming pool. Moreover, this improved above-ground swimming pool requires less maintenance than a traditional wood pool, while providing a more esthetically pleasing appearance than a standard above-ground swimming pool.

While in all the embodiments the decorative panels, posts and ledges have been represented as mimicking the appearance of wood boards, it is also considered to have other decorative patterns, such as, for example, the appearance of tiles or rocks.

The embodiments of the invention described above are intended to be exemplary. Those skilled in the art will therefore appreciate that the forgoing description is illustrative only, and that various alternatives and modifications can be devised without departing from the spirit of the present invention. Accordingly, the present is intended to embrace all such alternatives, modifications and variances which fall within the scope of the appended claims.